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Profile

December 1978

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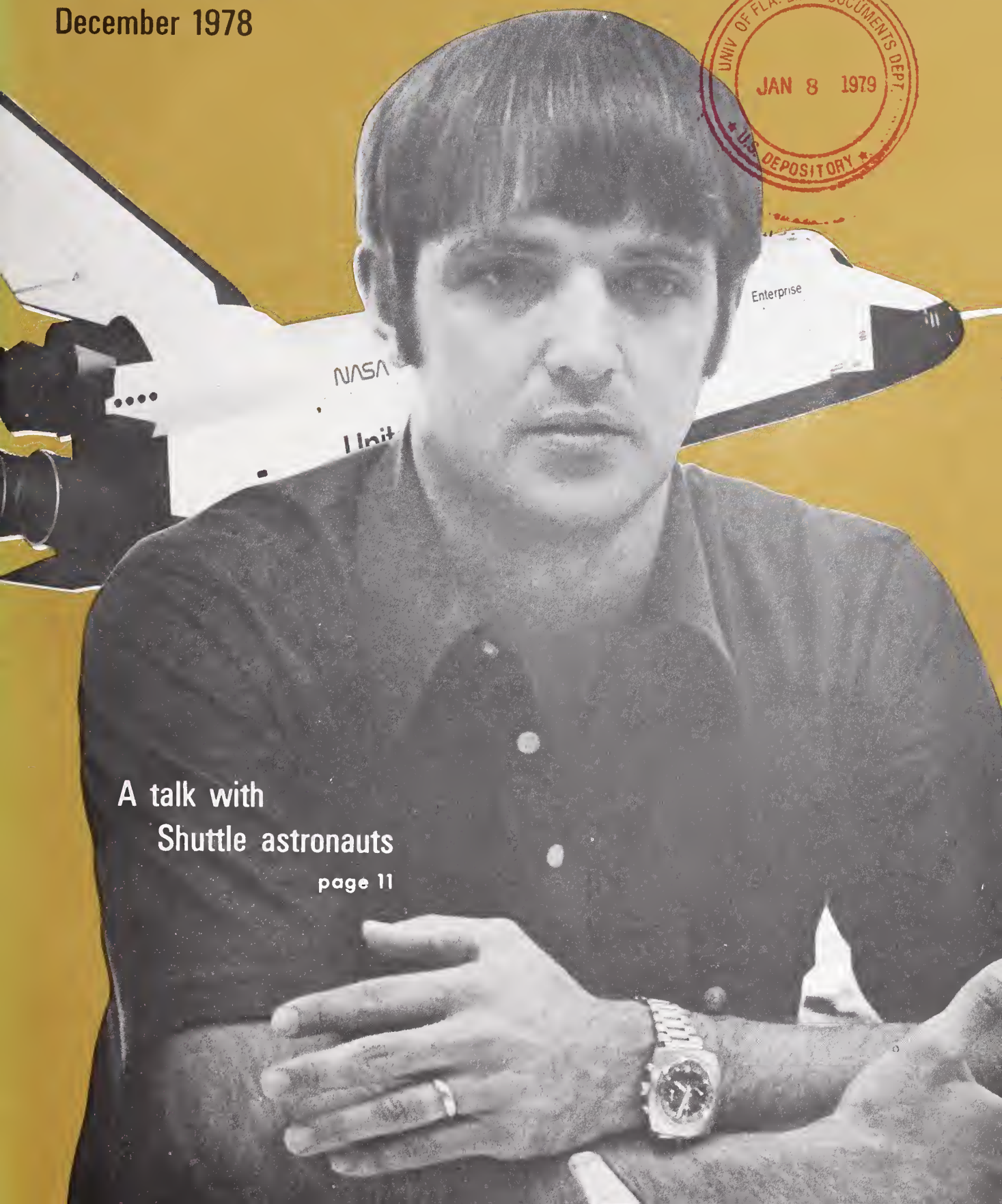

A talk with
Shuttle astronauts

page 11

PROFILE staff dedicates this issue to Captain Florence I. Dunn who has been Deputy Director of High School News Service since November 1976.

Capt. Dunn is a native Virginian and retires this month after more than 20 years service in the United States Army. She plans to make her home in the Norfolk, Va., area.

Staff members will long remember her dedication to excellence and thoroughness which has enabled the magazine to make visible progress. Her constant striving for a superior magazine spurred her associates to surpass accepted standards for excellence in a publication.

Best of luck Capt. Dunn and remember, ''the caissons will roll on.''

Profile

December 1978
Vol. 22, no. 3

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Introducing:

Director

Captain Vincent L. Knaus, the new High School News Service Director, entered the Navy in 1955 through the Naval Aviation Cadet Program. He has had a variety of assignments, primarily in the aviation field, including 252 combat missions over Southeast Asia. Prior to this assignment, he was with the Air Traffic Branch, Office of the Deputy Chief of Naval Operations, (Air Warfare), Washington, D.C. Capt. Knaus graduated from the National War College, Washington, D.C., Naval War College Command and Staff Course, Newport, R.I., and has a master of science degree in International Affairs from George Washington University, Washington, D.C. He is a candidate for a master's degree in Public Affairs from American University, Washington, D.C.

Staff artist

Jack Taylor, whose drawing of a Coast Guard emergency medical technician appeared on the back cover of last month's issue, is a 24-year-old native of Wichita Falls, Texas. His second sketch appears this month on page two. After graduation from Wichita Falls High School in 1972, Jack enlisted in the Navy and served as an artist aboard the aircraft carrier USS Independence. Upon discharge in 1975, Jack, his wife Angela and two children, Jason and Carissa, settled in Norfolk, Va. Now attending college full time in the evenings, he works as an apprentice electrician on Norfolk Naval Station during the day and hopes to eventually pursue a full time art career.

Directing traffic --

Coast Guard style

By Paul Short
Photos by PA1 Lou Parris

Driving Up Seattle's Alaskan Way you suddenly find yourself overwhelmed by a nearly uncontrollable urge to run away to sea. The screech of the seagulls mixed with the unmistakable odor of a dozen fish markets assaults your senses.

This is Seattle's waterfront and signs of the sea are everywhere. Rusty trawlers with names like Yukon Queen or Katy Too bob gently at their moorings, nudged by the wake of a passing ferryboat. In the background, at Terminal Island, on the far side of Elliott Bay containerships queue up to load cargo for the Far East and Alaska.

The port of Seattle, probably one of the saltiest-looking outside of New England, is also one of the busiest in the country. Every day more than 140 ships, tugs and barges move commerce in Puget Sound. Add to this the 420 shuttle trips made by Washington State Ferries and you have a saltwater ant hill. Or, the perfect ingredients for a major disaster, however you want to look at it.

But all this traffic isn't just blitzing helter-skelter through the port, at least not since 1972. That's when the Coast Guard established a plan for traffic entering and leaving Puget Sound. They called it Vessel Traffic Service (VTS) and established a command post at Pier 36.

Inside the VTS operations center is a huge dimmed room, dominated by a plexiglas-covered table, upon which are mounted charts of Puget Sound. Surrounding the table are radio transmitters, computers and radar screens. A five-man watch mans the equipment and shifts tiny toy ships around on the table. Each of the toy ships represents a real ship that is somewhere in Puget Sound at that time.

There are more than 30 ships in the VTS coverage area right now, although there have been more than 65 at one time and theoretically could be many more.

The ships check in with the Coast Guard VTS by radio when they pass certain buoy-marked checkpoints inbound and outbound through the Sound. The master or pilot reports the ship's name, location, speed and destination. The VTS or "Seattle Traffic" as it is known over the radio, provides weather and traffic information and charts the ship's progress through traffic separation lanes until it ties up at the pier or clears the coverage area outbound.

There have been no major mishaps in Puget Sound since the center was established. Plans are now being made to extend the system's coverage to cover traffic lanes leading to oil refineries north of Seattle.

One of the young Coast Guardsmen on watch is Quartermaster Third Class Mark Tapia, 21, formerly of Bellevue, Neb. Mark is manning a headset, taking information from a freighter to update its position, but during his eight-hour watch he could be filling in at any position.

Quartermaster Mark Tapia keeps track of ships in the Puget Sound by shifting toy figures on the chart table.

"All watchstanders rotate among communications, radar and plotting," he said. "Usually it takes about six weeks to break-in so you can handle any of the positions."

During this break-in period the new watchstanders learn to recognize the various points of land and channels in this 2,500 square miles of estuaries, inlets, bays and passages. They also learn a little about international communication.

"Sometimes you have to speak a kind of pidgin English to talk to foreign vessels. It can be very challenging when three people are trying to talk to you at once," Tapia said.

Tapia was graduated first in his class in Quartermaster School in Orlando, Fla., after finishing basic training. He served on an icebreaker before coming to the VTS. His enlistment will soon be finished but Tapia plans to stay in the maritime field.

"I would like to go to work for the National Oceanic and Atmospheric Agency (NOAA) to get some more sea time and eventually work for my mates' papers. The Coast Guard has been a good way for me to get into maritime work, especially in my rate as a quartermaster," he explained. Quartermasters are trained to read and understand charts, steer the ship in important situations such as docking and undocking, and to generally assist in the navigation of the ship. Because their specialty teaches them so much about navigation and signaling, quartermasters may be assigned to the Vessel Traffic Service's operations centers.

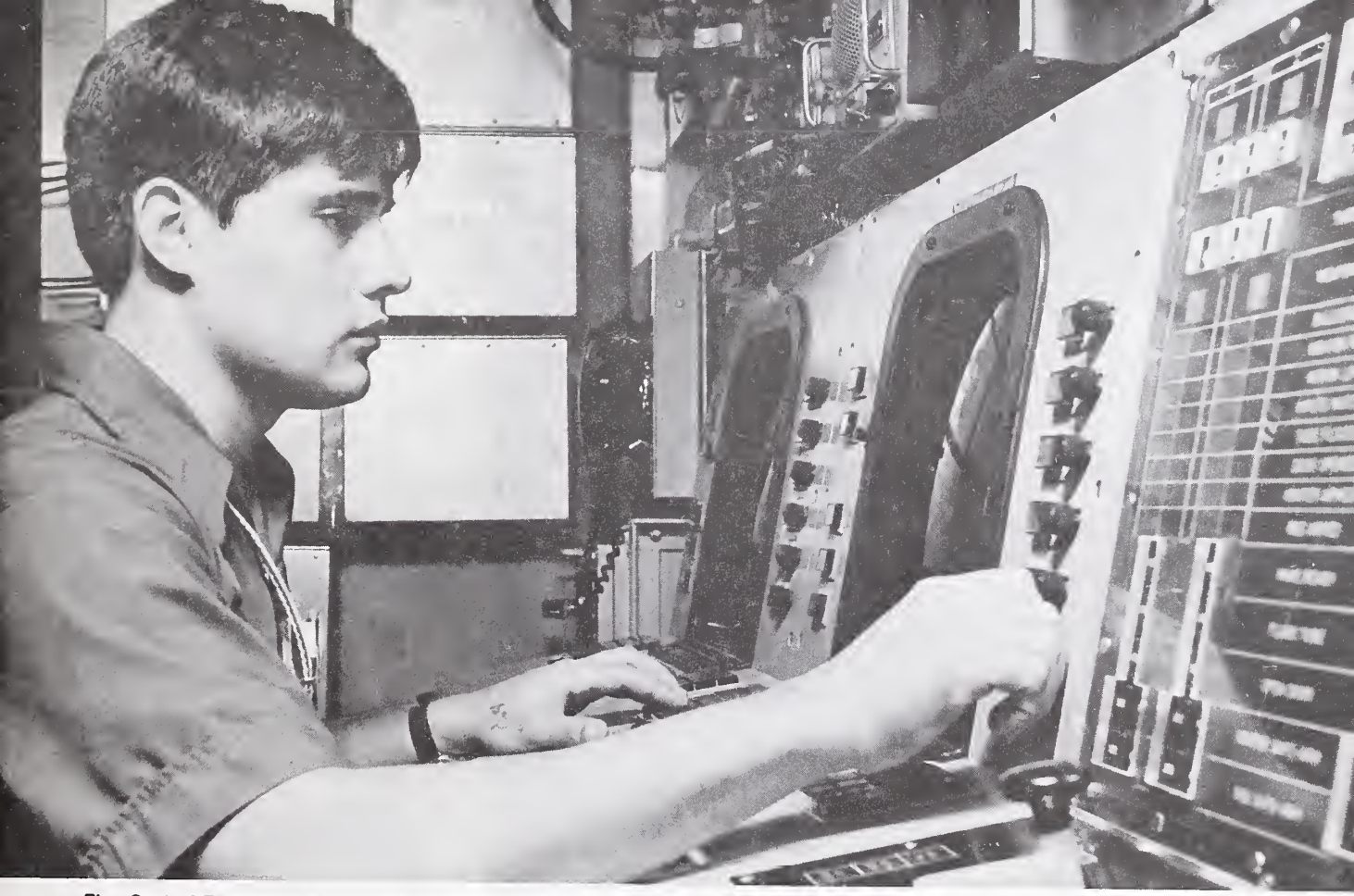
Radarmen may also be assigned to Puget Sound VTS. Charles Key Jr., who attended Baltimore Polytechnic High School before entering the Coast Guard, is a radarman third class. After finishing five months of radarman school at Governors Island, N.Y., Key, went to sea on an icebreaker. He was transferred to the VTS temporarily because of a minor medical problem but has fallen in love with Seattle and never wants to leave the area. Key likes his job as a radarman, although he admits the radar work at the vessel traffic system is not as challenging as that aboard ship.

Radar is important in the traffic system, though. Ships can be tracked and violators who fail to check in with Seattle Traffic are detected. Besides operating the radar set, Key's training enables him to make some technical adjustments and do minor maintenance.

Puget Sound is one of four Vessel Traffic Service units in the Coast Guard. Others are in New Orleans, Houston-Galveston, and San Francisco. The next VTS unit will be set up at Valdez, Alaska, at the end of the Alaskan Pipeline and fast becoming a major oil port. Other units are planned for New York and Chesapeake Bay.

The systems are not cheap—they cost from $1 to $8 million to place into operation. But when a single tanker accident could cost up to $85 million, and a major oil pollution recovery operation could cost $25 million, this bit of preventive maritime medicine seems economical indeed.

Radarman Charles Key Jr., watches one of the VTS radar sets.



Fire Control Technician Second Class Juan Morales tracks "targets" on the fire control system of his ship, the nuclear-powered attack submarine USS Hammerhead. It is Morales' responsibility to maintain and operate the controls for these weapon systems. (Photo by Mike McCabe)

"Fire when ready..."

By Tony Delgado

The Battle of Manila Bay, fought in 1898 and regarded as the turning point in the Spanish-American War, prompted Admiral George Dewey's famous battle order, "You may fire when ready, Gridley."

That order couldn't be carried out in combat aboard Navy ships today without the help of modern-day Gridleys serving as gunner's mates and fire control technicians.

They are responsible for operating and maintaining some of the most sophisticated electronic weapon systems in the world. A far cry from handling the back-breaking cannon and shot of Gridley's day.

These electronic-age Gridleys can be found throughout the fleet aboard every type of Naval fighting ship.

Fire Control Technician Second Class (FTM2) Tom Wold, a native of Brookfield, Ill., works closely with the short-range missile system of the USS Inchon, homeported in Norfolk, Va.

"I work on an important aspect of this ship's defense system," says Wold aboard the 18,000-ton amphibious assault ship, designed to carry Marines into battle.

"Actually, the system I help maintain is the only real defense the ship has besides its guns," explains the 22-year-old sailor.

Also serving aboard the Inchon is Gunner's Mate Third Class (GM3) Charles W. Burris from Foster, Mo., who, like Wold, takes his job seriously.

"Sure I think my job is important," said the 21-year-old "Show Me State" native. "The job I do aboard the Inchon plays an important role in the defense of the ship.

"As a gunner's mate aboard the Inchon," explains Burris, "I'm responsible for conducting routine maintenance and serving as mount captain for 'mount 32' during gun shoots."

Mount 32, aboard the 602-foot Inchon, is the ship's largest gun mount with two three-inch 50 caliber guns that serve as one of the ship's primary

Fire Control Technician Second Class James Minish performs a preventive maintenance check on a torpedo launcher aboard the guided missile cruiser USS Sterett, homeported in San Diego. (Photo by Claudie Bob Johnson, II)

defense systems. Burris' ultimate responsibility is the maintenance and operation of mount 32, but as gunner's mate he is trained in the mechanics, safety features and operations of a wide range of Navy weapon systems.

Wold and Burris have spent a combined total of nearly two years learning the skills of their trade.

For fire control techs the initial training begins at Great Lakes, Ill., with 25 weeks of mind-boggling work in electronics; direct and alternating current; remote control systems; operation and maintenance of motors and generators; algebra; trigonometry and elementary mechanics. After training the new tech could be assigned to a 16-week specialized school on the Basic Point Defense Surface Missile System at Vallejo, Calif.

"A radar wiring system is complicated. If you've ever seen the

Fire Control Technician Second Class Tom Wold, Brookfield, Ill., adjusts the fire control radar aboard

inside of a television set, you have an idea of what I'm talking about," says FTM2 James Minish aboard the guided missile cruiser USS Sterett, homeported in San Diego. "Learning about the system is a real challenge. You have to pay attention to detail and double-check everything you do."

GM2 Kirby Lyons, equating his job as gunner's mate aboard the USS Spruance, homeported in Norfolk, to that of a civilian locksmith, small appliance repairman and hydraulics technician, says, "My job is a conglomeration of professions. Gunner's mates get a pretty diversified amount of training because our job incorporates a number of technical fields."

Lyons, like Burris, began his training with the two gunner's mate schools at Great Lakes. In 11 months, the schools meshed training in electronics,

his ship, the USS Inchon. (Photo by Lon Cabot)

Gunner's Mate Second Class Alan Chambers, Dane, Wis., specializes in missile systems aboard the guided missile cruiser USS Sterett, homeported in San Diego. (Photo by Claudie Bob Johnson II)

Gunner's Mate Second Class Kirby Lyons checks equipment aboard the destroyer USS Spruance. The Redmond, Wash., man supervises three other sailors in operation and maintenance of the destroyer's five-inch gun. (Photo by Dave Longstreath)

Gunner's Mate Third Class Charles W. Burris, Foster, Mo., mans a gun mount aboard his ship, the USS Inchon during a training drill. (Photo by Lon Cabot)

hydraulics, schematics and various levels of ordnance handling. This prepared him to work with guided missile launching systems, rocket launchers, train and supervise crews of these systems, control storage and use of explosives and act as junior gunnery division officer.

Today, Lyons supervises three junior gunner's mates in operating and maintaining an Atlantic fleet destroyer's five-inch 54-caliber gun mount, a job he calls challenging and rewarding.

"It's a good feeling knowing my job plays an important role in the defense of the ship," said the young Navyman with obvious pride. "The gun mount I work on serves as one of the ship's primary means of defense in the event of close-in enemy attack and also serves a key role in shore bombardment."

For these push-button-age Gridleys the training is strenuous, the jobs are tough and when the order to action is given they will be "ready to fire."

(Background material and photographs furnished by the Navy's Public Affairs Centers at Norfolk and San Diego.)

A dream to believe in

By Carol Nelson
Photos by Tony Delgado and NASA

Our thanks to the National Aeronautics and Space Administration and Milt Reim for providing coordination for this story.

Astronauts may have the ultimate job.

They commute beyond the blue edges of the earth's atmospheric envelope, into what Star Trek calls, "the final frontier" of space.

Astronauts themselves are more likely to think of space as simply part of the job. Most of their work area is earthbound—in the laboratories, classrooms, offices, flight simulators and training aircraft they use during months of preparation for space flight.

Several new astronauts took time from their fast-paced schedules to talk with PROFILE editors Nelson and Delgado during a visit this past summer to the NASA Johnson Space Center in Houston. In spite of the flood of attention this group has received from the press services, radio and TV, they talked easily about their present training and their future in the Shuttle program.

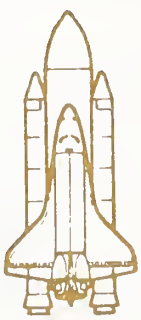
Coats

Fabian

"Flying like a space craft and flying like an airplane are two different things—but the Shuttle does both."

PROFILE was particularly interested in finding out how they got their jobs—how they pointed their lives and careers in the right direction so they were ready when the opportunity came. But before we share their comments a little background on the Shuttle, its mission and the jobs in space it offers:

The bulky 120-foot Shuttle, familiar from its piggy-back test flights off 747 airplanes, will hitch a ride into space lashed to two reusable rockets and a large fuel tank. The propulsion units will drop away to leave the orbiter to function as a space station for up to 30 days at a time. It can be used as a launching and retrieving platform for small satellites, as a repair station, and as a laboratory for research and experiments. On the way home, Shuttle will settle onto a runway like an airplane and be refurbished for another mission.



Launch configuration

Each orbiter can be used about 100 times, loaded with different mixtures of equipment and crews. Commanded and flown by pilots, Shuttle also carries new positions for mission specialists and payload specialists, who will be concerned with the scientific assignments on board.

The first astronauts recruited in more than a decade, the Shuttle group represents a broad choice of backgrounds and skills. They come as aviators, doctors, scientists—from all parts of the United States—from universities, research labs and four of the military branches. They are from 27 to 40 years old; some are married, some single. They all have the sort of energy that seeks the most out of everything they do and the best out of themselves.

For the 21 military officers chosen for the Shuttle program, becoming an astronaut is the peak of a long hill in their service careers. Although military service, especially flying experience, is the traditional entrance into consideration as an astronaut, the Shuttle program also accepted 14 civilian professionals (six of whom are women). Military or civilian, they now train side by side for flights scheduled through the 1980s.

The pilot candidates were required to hold at least a bachelor's degree in engineering, the physical sciences or mathematics, have logged 1,000-2,000 hours of flying experience and meet the strict physical standards. Mission specialists join the program in technical or scientific positions; they, too, needed a bachelor's degree as minimum education and physical conditioning that would enable them to pass NASA's medical examinations.

Fisher

> **"The whole world is watching what we're doing and we have a responsibility to do well."**

NASA plans to observe all the Shuttle astronauts very closely to answer its questions about who should be chosen for future space flights. In spite of the peculiar sensations of extra "G's" or weightlessness, space has been shown to be a relatively benign environment. As Shuttle becomes a regularly scheduled service for transporting people and equipment into space, NASA may decide that flights can include travelers who are in normal physical shape. Payload specialists, in particular, may take the Shuttle on a one-time basis, to accompany a certain experiment or piece of gear that they have been trained to monitor or operate.

Training for all the new astronauts will cover two years. Every aspect of the job will be absorbed and practiced. Long before they enter space, they will feel as if they have already flown on several missions. They are excited, working hard and looking skyward.

Although we talked with the astronauts individually as they hurried from place to place, we asked the same basic questions of each and have grouped their responses. Now for our interview:

PROFILE: When did you decide you wanted to be an astronaut?

Fisher: The first time I thought about it, I guess I was about 13. In my head, I tried the idea out, to see how it felt. But I knew there were no opportunities at the time for women in this field, so I pursued a career in chemistry and then went into medicine. Luckily, I found an ad in a NASA newsletter last year and noticed that I fit the requirements.

PROFILE talked with . . .

DANIEL C. BRANDENSTEIN: Pilot; born January 1943 in Watertown, Wis.; lieutenant commander, Navy.

MICHAEL L. COATS: Pilot; born January 1946 in Sacramento, Calif. (but considers Riverside, Calif. as his hometown); lieutenant commander, Navy.

JOHN M. FABIAN: Mission specialist; born January 1939 in Goosecreek, Tex. (but considers Pullman, Wash. as his hometown); lieutenant colonel, Air Force.

ANNA M. FISHER, MD: Mission specialist; born August 1949 in Albany, N.Y. (but considers San Pedro, Calif. as her hometown); civilian.

ROBERT L. STEWART: Mission specialist; born August 1942 in Washington, D.C. (but considers Arlington, Tex. as his hometown); major, Army.

Coats: Obviously, everyone would like a shot at being an astronaut, but you really can't decide on your own to be one. You have to be in the right place at the right time. NASA hasn't chosen astronauts for many years, but when Shuttle gets going, they should need more people to train. I had lots of flight time built up in the Navy when the selection process began and I happened to be the right age, with the right experience.

Stewart: For me, it seemed a logical progression. I had been in combat as a helicopter pilot and had done some flight instructing and charter work—also flew experimental planes as a test pilot. Becoming an astronaut was the next step.

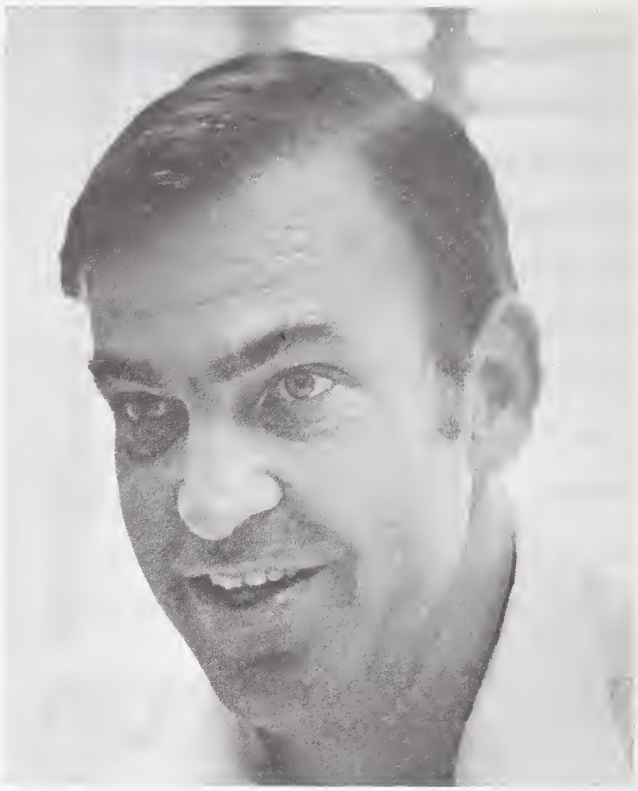
PROFILE: Were there any special qualifications you had which helped your selection?

Fabian: Basically, I think the fact that I've had some very diverse assignments in the Air Force helped. And I've had some aeronautical engineering.

Brandenstein: I would say that my flying time counted heavily. It shows that I can adapt to technical situations. I've always liked math and physics and I might have worked toward becoming a mission specialist rather than a pilot if I had known about the position earlier in my career.

Fisher: Well, even though NASA gave the bachelor's degree as its basic education requirements, most everyone chosen had an advanced degree in some field—the competition was pretty stiff. And even though some of the degrees are in fields that don't relate directly to Shuttle work, NASA expects you to be a "generalist." My background in emergency medical procedures may come in handy at some point, but it was more important that I could show that I can handle myself under pressure.

Fisher



Fabian

PROFILE: What has training been like so far?

Coats: We are splitting our time between academics and flying. Some days we go over to Ellington Air Force Base (near Houston) for check-outs on the T-38 (a high performance jet trainer). Even the mission specialists are learning things from it, such as getting familiar with talking over a radio. We're also learning aerodynamics as it applies to the Shuttle. Later, we'll get into the computer software (Shuttle has five onboard computers.)

Stewart: We're also working with some of the older astronauts, helping them on projects. This way we will learn the system for determining problems and how to develop the ideas to help solve them.

Brandenstein: I'm anxious to get into the flight and control systems simulators. They give you the chance to practice handling the Shuttle and get used to the feel of it. We will also fly in the Gulfstream II—that's a training jet that's set up on one side to fly exactly like the Shuttle.

Fisher: We've done all sorts of things like water survival training in Florida. They try to vary our training as much as possible so that we are exposed to many areas outside our individual areas of expertise. I'm enjoying the T-38, too. I have always wanted to fly and this helps me understand what the Shuttle pilots will be thinking about.

Stewart

"Even though I'm an astronaut, I'm still a soldier."

Coats

Brandenstein

PROFILE: What route would you advise someone to take if he or she wanted to be an astronaut?

Coats: I'd say to hit the books early. If you don't enjoy math or science, you probably won't do well in them, but give them a chance. There's a lot of satisfaction in learning technical things. As far as flying goes, you'd get the experience in the high-performance aircraft in military service.

Stewart: Give yourself a challenge. You can't second guess NASA about what they're going to need, but you should prepare yourself to be able to absorb knowledge—train your mind. They don't expect you to know everything here, just be able to learn.

Fisher: There is a need for almost every kind of scientist, especially in engineering and astronomy. But do the best you can in whatever field you choose. And if you believe you can do it, you have a chance.

Fabian: You might think about going to one of the service academies—they give you a good science and math foundation. But you can start preparing at any time. Decide on excellence and follow through with it.

Anna Fisher capped the group's feelings in saying, "Being an astronaut is tremendously exciting—but it's not all glamour. There is a lot of studying behind a desk and plain hard work. We do go to work each day anxious to see what we'll be doing next. And it's a dream we all believe in."

Flaunt it!

Johnny Cash, Flip Wilson, The Manhattans, Jerry Van Dyke and Frank Gorshin have more in common than being entertainers. All these well-known show business names have a similar experience—they participated in the Air Force Talent Contest.

Gorshin, who was in the Army, was eligible to compete because he was assigned to an Air Force base. All active duty members of the uniformed services are eligible if assigned or attached to an Air Force base.

The contest, brainchild of now retired Air Force Colonel Al Reiley, had its beginning 25 years ago. Col. Reiley saw the need for a showcase for talented Air Force members.

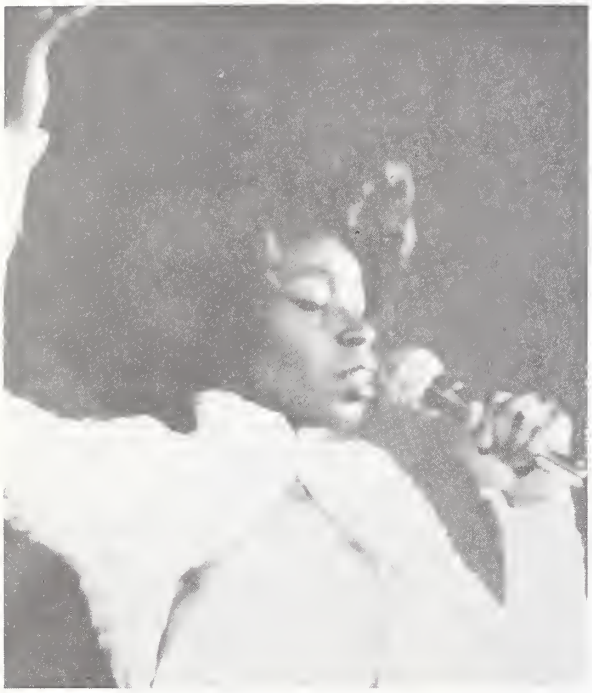
Every year since 1953, thousands of Air Force men and women who dream of fame such as that of a Cash, a Wilson or a Gorshin enter base level contests. Their ultimate goal is the "Roger" which resembles the famous "Oscar." The Roger is given to worldwide contest winners. There is a plus: the opportunity to tour for five months with the Air Force's traveling road show, "TOPS IN BLUE," which visits remote and relatively isolated bases in the United States and overseas.

Contestants perform in 13 categories grouped under three headings. In all but two of the categories, men and women compete against each other.

The vocal division has four

By Aaron Williams

Photos by Eddie McCrossan, Aerospace Audiovisual Service, Arlington, Va.



Contestants come from all career fields.

TOPS IN BLUE members are away from their duty station and regular Air Force jobs for approximately five months.

Each contestant or group has a maximum of five minutes to perform.

"...Pull the best out of them!..."

Members of Air Force bands cannot compete in their specialty.

categories: male, not self-accompanied; female, not self-accompanied; vocal self-accompanied (male or female) and vocal group (five members maximum, male, female or mixed). There are two categories in the instrumental division: instrumental solo, male or female, and instrumental group (seven maximum, male, female or mixed).

"I will be back next year..."

The largest group, the performing arts, has seven categories. They are: (1) classical, male or female, vocal or instrumental, one person; (2) dramatics, male or female, one person; (3) comedy, male or female, one person; (4) dance, male or female, one person; (5) master of ceremonies, male or female, one person; (6) potpourri (musical) male, female or mixed, three persons maximum, and (7) potpourri (non-musical), male, female or mixed, three persons maximum.

No one just walks on stage at a base-level contest (first step) and wins first prize. The acts begin rehearsing, training and polishing material months in advance. All this is done on off-duty time.

Most of the performers are in the Air Force for a career. Sergeant Len Howe, a chapel management specialist at Myrtle Beach AFB, S.C., wants to combine his "dream" with his Air Force career.

This year was his third attempt to get into TOPS IN BLUE, and his second time at the worldwide contest. He is achieving some measure of success, off-duty, on radio and as a master of ceremonies in jobs near his base.

Why does he, like so many others, continue to enter this uniquely Air Force program instead of taking advantage of his talent in a civilian career? "Most of us who are always in the shows seem to be career-minded," he explains. "This gives us a chance to stay in the Air Force, to do our job, and then entertain on the side and try for that goal of TOPS IN BLUE."

Although he didn't get that number one spot this year, Howe says he will try again. "I will be back next year. I don't suspect that I'm going to win first or second just because I've already done that once. We have worldwide winners from last year who were left home at command level this year."

Once a winner at a base competition, a talent competes against other base winners in one of the Air Force major command programs. Winning first in the command level contest does not automatically qualify the performer for the worldwide contest. A contestant must achieve a minimum number of points from the judges to qualify for the worldwide competition.

This year there were 147 acts; 26 were chosen for TOPS IN BLUE at the Silver Anniversary Contest held at McGuire AFB, N.J.

Getting a show of this size on stage is the job of Air Force Director of Entertainment, Tom Edwards. Working out of Randolph AFB, Texas, under the supervision of the Air Force Directorate of Morale, Welfare, and Recreation, Edwards is the "glue" holding the show together. As Howe says, "Tom takes care of everything."

Who judges these contests? At the base level, the most qualified local artists are invited. This year's panel for the worldwide contest was made up of actor-comedian Glenn Ash (the movie "American Hot Wax"), recording star Lynn Collins, actress Patricia Weaver (TV's "Days of Our Lives"), and actor Ross Martin, best known for his role in the television series "Wild, Wild West."

Martin pinpointed the judges' motivation with, "I think that everyone who wants to come into the business of entertainment—of bringing pleasure and laughter to others—should be encouraged."

Staff Sergeant Domenick Donelli, McGuire AFB, writing in AIRMAN magazine, described the 25th annual contest: "That it was a success was evident in the reaction of the audience and judges. But the program itself, carried off in a highly charged atmosphere of seeming confusion, was actually very tightly controlled. It was scheduled pandemonium with a purpose."

"... pandemonium with a purpose."

"It's needed," Tom Edwards says. "There's a matter of running a top-notch professional program for the Air Force. It's not too different from how well you prepare that C-141 and get it off the runway—and how quickly—and with what type of team you have flying it, and how effectively that team accomplishes its mission. The same things go for a program like this. It's a very visible program for the Air Force. We try to motivate the people as much as we can.

"If we instill that motivation, we achieve a professional quality program. The performers walk up on that stage and do a much better job. Pull the best out of them! That's the same way we do it on the flight line or anywhere else; we try to pull the best out of our people."

Through this program and others like it as well as with day-to-day jobs, the Air Force is saying to its people, "When you've got it, flaunt it!"

Thanks to Jim Walker, Office of Air Force Entertainment; Staff Sergeant Domenick Donelli, Office of Information, McGuire AFB, N.J., and AIRMAN magizine for material used in the above article.

Drive a tank to work

Story and photos by Carol Nelson

Ever think your car "drives like a tank"?

Take my word for it—it doesn't.

A tank handles better than some cars, can charge into ravines and zip across mushy creek beds without breathing hard. The ride is a little like traveling inside a thunder cloud made of clanking, grinding steel. Noisy. Powerful.

Crazy notions of confidence pop in your head as the tank chews up small trees in its path. Nothing can stop you and you know it. You don't sleep through the big gun going off, either. The blast kicks and echoes and then far away downrange, the puff of an explosion drifts up. Tankers seldom miss.

Even rotten gas mileage (about eight **gallons** to the mile) and no options on color scheme or interior don't dampen the enthusiasm of Army tankers. To them, a tank is a thing of beauty.

Weighing in at more than 50 tons, the Army's main battle tank of the M60 series is beautiful—prized for its abilities. It's built for what tankers call "shock effect," a fierce combination of rapid advance and firepower. To go wherever it has to, sight the target with eagle-eye range finders and telescopes, and blow it into clouds of flying scraps—this is shock effect.

As prehistoric as they look, tanks are an important part of the modern Army. They have grown and evolved right along with changing combat needs. No other ground weapon system has such a protective hull, quick rush and retreat. Carrying the latest in directed weaponry, the tank can creep into firing position almost before the enemy is aware of its presence; it is a trusted member of coordinated attacks. Tankers say they would rather ride than walk or fly into battle, anyway.

What's it like to drive a tank for a living—to be constantly preparing to take it into action and make it move and function like an extension of your own skin? The majority of men in armor jobs say something along the lines of, "I can't explain it, I just like it—it's different from anything I've ever done before."

There's extra money in it, too. A $2,500 combat arms enlistment bonus is paid in cash at the end of training and qualification in an armor skill.

New tankers go first to Ft. Knox, Ky., home of Army armor. Out past misty fields suited more to turning out champion horses (which, incidentally, preceded today's armored vehicles as the Army's main transport into battle), Ft. Knox sprawls and teems with activity. The Armor School there teaches officers and enlisted men the fundamentals of soldiering, marksmanship, weaponry and tactics, as well as leadership and armor

The futuristic XM1 is believed to be the world's most advanced tank. Packing a 1500 horsepower turbine, the XM1 was first shown to the public in mid-1978 and is currently being tested and evaluated. (U. S. Army photo) Armor trainees (above, right) grin on their way out to training areas in an M113 armored personnel carrier.

No one rides horses into battle anymore—but in today's Army, cavalry and armor work together.

Tanks throw tracks about as often as cars get flat tires. Students learn to repair and replace the track, as well as perform many other routine maintenance jobs.

subjects.

Enlisted men move from basic combat training into courses geared to the positions each will take when he climbs down into a tanker's metallic world. Driver, gunner/loader or scout—he picks one job and concentrates on it, with some cross-training in his buddys' jobs so he understands all parts of the close-knit team.

Most tanks carry a crew of four. The senior man, or tank commander, stretches out of his hatch, giving orders to maneuver and fire. His radioed voice directs and steadies his men. Beneath him, the grey-green monster bulges with preparations and the heavy sounds of responding machinery.

During training, the gunner/loader learns both jobs; he hoists the rounds into the gun, positions the turret, and presses the button that lets 'er rip.

The driver steers by moving handle bars very much like those on a bicycle. Stopping, when he must bear down hard on the left foot brake, is about the only time he feels the tank's real strength. He learns to take his machine through terrain that would swallow anything else.

The armor field also branches into cavalry (sorry, no horses) and its missions in scouting and

Like driving inside a garage, the tank driver simulator allows armor students to practice controlling their machine before they try it in a real tank. Instructors can program the simulator to match any terrain condition or sticky situation which a driver might encounter.

reconnaissance. Using a specialized group of transport vehicles, the recon teams forge ahead of the battle tanks, to gather and report information on the landscape, the enemy and the combat situation.

After 14 weeks of difficult mind and body stretching training at Ft. Knox, tankers are expected to be ready for combat, prepared to pull in with armor and cavalry units around the world. In the tight space of surrounding steel, each man must know his job, his machine and the men in there with him. He has to want to earn the pride the team has in getting its act together so that everything comes off on time, on target.

In winter, it's colder inside a tank than outside; summers can make the hull feel like a griddle. More time is spent plowing along in mud at ten or fifteen miles an hour than at cruising on pavement at forty. Breezes don't reach down into the interior; little can be seen of the scenery except for dead-ahead target sighting. No stereo music relieves the noise of hydraulics and headset crackles.

But the men in armor wouldn't trade their lumbering tracks for the slickest set of wheels. On the battlefield, big and ugly is beautiful.

Streaming water, a Sheridan M551 tank "swims" its way out of a lake. Below, armor students line up on the firing range, ready to practice gunnery skills.

Communication is as important for tankers as it is for other parts of combat operations. Members of a tank team rely on their helmet radios to hear and speak to each other above the din of the machinery.

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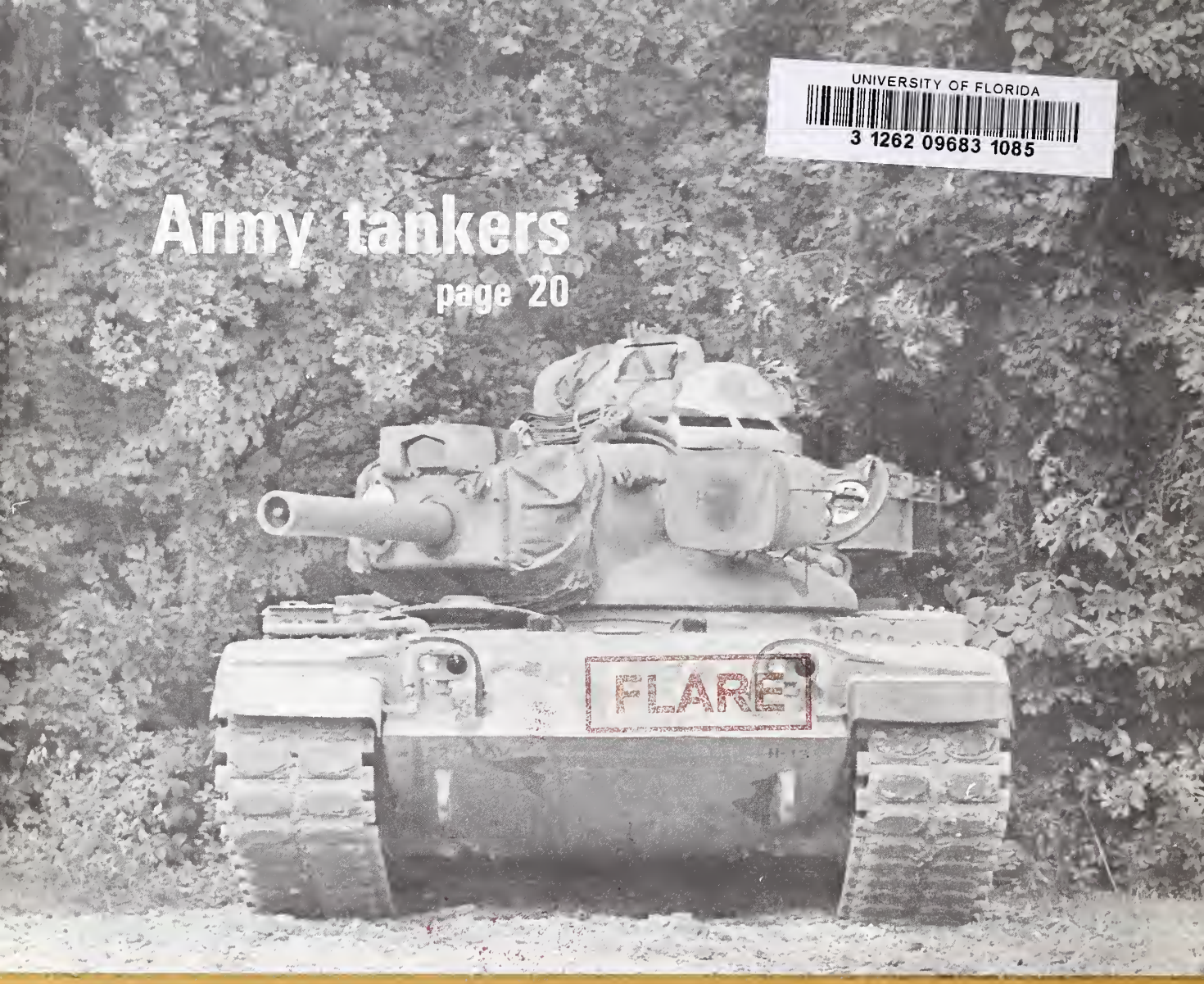

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